

SEQUENCE LISTING



<110> Japan Science and Technology Agency
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<120> GENETIC MARKERS LINKED TO GENE LOCUS INVOLVED IN BARLEY RESISTANCE
TO YELLOW MOSAIC DISEASE AND USE THEREOF

<130> 1035-664 / A181-10PCT

<140> US 10/594,250

<141> 2008-06-24

<150> JP 2004-090644

<151> 2004-03-25

<150> JP 2004-342737

<151> 2004-11-26

<160> 62

<170> PatentIn Ver. 2.1

<210> 1

<211> 20

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: primer

<400> 1

cttggccttg atcttctgct

20

<210> 2

<211> 20

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: primer

<400> 2

gaccgtgtca ggaaagcaat

20

<210> 3

<211> 20

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: primer

<400> 3

tcttttctgg gttggtgaac	20
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<220>	
<223> Description of Artificial Sequence: primer	
<400> 4	
gcagcttttg agttcgttcc	20
<210> 5	
<211> 20	
<212> DNA	
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<220>	
<223> Description of Artificial Sequence: primer	
<400> 5	
ctgtttggat gactgcgaga	20
<210> 6	
<211> 20	
<212> DNA	
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<220>	
<223> Description of Artificial Sequence: primer	
<400> 6	
attacgcaac ctgatggagc	20
<210> 7	
<211> 20	
<212> DNA	
<213> Artificial Sequence	
<220>	
<223> Description of Artificial Sequence: primer	
<400> 7	
accccggaag ctaagatgat	20
<210> 8	
<211> 20	
<212> DNA	
<213> Artificial Sequence	
<220>	

<223> Description of Artificial Sequence: primer

<400> 8
agtcggaaca tgcggtacac 20

<210> 9
<211> 21
<212> DNA
<213> Hordeum vulgare

<400> 9
atcttctgca ggcacttgtc g 21

<210> 10
<211> 21
<212> DNA
<213> Hordeum vulgare

<400> 10
atcttctgca agcacttgtc g 21

<210> 11
<211> 21
<212> DNA
<213> Hordeum vulgare

<400> 11
tgccgtggcc gtgcacgatg a 21

<210> 12
<211> 21
<212> DNA
<213> Hordeum vulgare

<400> 12
tgccgtggcc atgcacgatg a 21

<210> 13
<211> 21
<212> DNA
<213> Hordeum vulgare

<400> 13
attactcagc tacacaccta t 21

<210> 14
<211> 21
<212> DNA
<213> Hordeum vulgare

<400> 14

attactcagc cacacaccta t

21

<210> 15

<211> 688

<212> DNA

<213> Hordeum vulgare

<400> 15

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gggtgggggtg gtataagtag atatacagaa cggaggaccg tctcctggtc ctcagctttg 120
ggtctttctt accttggcct tgatcttctg ctcgaggacc gccttctccg tgtcgagggtt 180
gaacatcctg ttgagggcgt gcatgttgct gagcgtctcg tccaggggtgc ggctgtcgct 240
gccatcgcat ctcagggtgct gcaacgggcc gtggaggagc ttgttacta tgcccgtgct 300
cagctcttcg atagaccttc tcgtcttctt gttgagggtt tcttccccga tcttctgcag 360
gcacttgctg agctcggatg ccttgatcct gtcggcatac gacctcagct ttttgatggt 420
cgggaccgtc tccagcgagt cctccacgc ctcgaaccgc ttcagttctt gggatgatgat 480
tgcttggggc tccattgctt tctgacacg gtcttccttg ttggcttcca ccacctcttt 540
caagtcgtca acattgtata cccgtgcgtg ctccacttga gataggcagg caccgacgtt 600
ccttggggacg gatatgtcga cgaaaagccg aacaccaccc atggcaagag agataggagg 660
aagcgccctc gcatgcccct tggatgaat 688
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<210> 16

<211> 645

<212> DNA

<213> Hordeum vulgare

<400> 16

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atactatcca gtatctacac atgaatatct ccagagattt tgctattatg atactgcat 120
caagaactgt ctgcaaaatc aagaaacact attttgatta cgtccctatg atatactgct 180
agttcctata tatctttcct gggttggtga acttgagctt ctgactgact gcttggtagg 240
ttcatctccg tgttcctctg gacttgaagg tgtgaggaag ggcagtcctc cagagaagaa 300
aagcgtgttg tgtgcctacc aaacttgctt cgttgacagc ccaagggcag gtccccacgt 360
gtcgtcgctt tattttcctt cttttcataa acaccttcaa acttttttca accacgcgt 420
gcaactggaa gtaatgattg tacaggctct tctttaattc aaatcacacg caacgtcaca 480
aatactaacc ttgacatgcc tggaaactggc agtgtggcta ccatccacct tcgcctagtt 540
gccatgtata aagatacggg ggagcttggt ggcatgacc gcataaggaa cgaactcaaa 600
agctgcttaa tgaggacaag acatctaatt aagaacaatt gaaga 645
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<210> 17

<211> 696

<212> DNA

<213> Hordeum vulgare

<220>

<221> UNSURE

<222> (10), (24), (30)

<223> n is a or g or t or c

<400> 17

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cataactcca atgtgatttt agtagtcacg tacaacatga tctaattatt attatggcgc 120
catccaattc ttagcgaccg acgagatgtt ttcacgttg tttgtagtaa cacaaaacag 180
agtagactgt ttggatgact gcgagaagta agccaatagc agctgccatg agcccaacgg 240
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caagccatgg gttcctcaag tacctctgcc ttagccaggc agtccacctc cggggggttgc 300
tctggaaccg cttctccagc ttcttgcatt tctcccgtag gtagttgcag ccgggggtcat 360
caggggtcaaa cataatcccc ttgcaaaggc cgacgaagca tttggccacc tcttcgttgt 420
tgccgtggcc gtgcacgatg acgcctctcc tcaccaagag ctccacgtcc ttcgtggtgc 480
aggccatctg ggacatgaac acgcagtatg ccgtgacatg gctccccacc gtctcccggc 540
tcctctgctc cagctccatc aggttgcgta atagccgcca cgtctcggcg tcgatgtcca 600
ggacggggat ctccagcgta ccgccaccgc cgtccagctt cagctcgagg atgcagcgga 660
tgacaccctt ctccgtcatg gccccgggcg ttgaac 696

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<210> 18
<211> 738
<212> DNA
<213> Hordeum vulgare

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<400> 18
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cacaggataa cttccgatac ctccaagcag ttgcaactca taagatgaaa ttatttataa 120
agagtggcca tgactaccta ccctacctgc tatctacagt tttttttgga tatactattc 180
acagttggtg tcgaagagac gtaaccaatc taggaacata catgggcaag gaatgacccc 240
ggaagctaag atgatgaatt ggaagaggag tcatgtacac aacctactta tagactatat 300
ataatttttag ggccatttct caaccaacac ctatttgaca agggcaagaa ttttacttcg 360
tattgatgaa acagatatca caattcacca ttacggcatt acttacctag ttgatgccaa 420
agaaacttaa taatatctaa gaaactatcc acctaaaggaa tgaccagaga agctgagatg 480
atgaattgga aggagtcaaa tacagaaccc attttttagat tatatgtaca aaattttagg 540
gtcattactc agccacacac ctatttgaaa acaacaggaa gaattttact tagtcatgat 600
gaaacagatt tcttttaaca aataagaatt cgactactcc ttagatatct aaagatggat 660
gacgtagcca gataccatgt agaacactga aaaggcgtgt accgcatggt ccgactgaag 720
actatcaatc atggtaag 738

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<210> 19
<211> 20
<212> DNA
<213> Artificial Sequence

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<220>
<223> Description of Artificial Sequence: primer

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<400> 19
acgatcgatc aaaaggacca 20

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<210> 20
<211> 20
<212> DNA
<213> Artificial Sequence

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<220>
<223> Description of Artificial Sequence: primer

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<400> 20
aatccgacga aatcaacgag 20

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<210> 21
<211> 20

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<212> DNA
 <213> Artificial Sequence

 <220>
 <223> Description of Artificial Sequence: primer

 <400> 21
 ctcgatcatc agcgacttca 20

 <210> 22
 <211> 20
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Description of Artificial Sequence: primer

 <400> 22
 gaagaggcac cttctgcaac 20

 <210> 23
 <211> 20
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Description of Artificial Sequence: primer

 <400> 23
 aatgtgcaca ccaaggttga 20

 <210> 24
 <211> 20
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Description of Artificial Sequence: primer

 <400> 24
 agacaacaac cgcctgtacc 20

 <210> 25
 <211> 19
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Description of Artificial Sequence: primer

 <400> 25
 gatgagtcct gagtaaacc 19

<210> 26
 <211> 19
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Description of Artificial Sequence: primer

 <400> 26
 gactgcgtac caattcacg 19

 <210> 27
 <211> 20
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Description of Artificial Sequence: primer

 <400> 27
 tccagccgaa caatttcttg 20

 <210> 28
 <211> 20
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Description of Artificial Sequence: primer

 <400> 28
 agtactccga caccacgtcc 20

 <210> 29
 <211> 19
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Description of Artificial Sequence: primer

 <400> 29
 gatgagtcct gagtaaatt 19

 <210> 30
 <211> 19
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Description of Artificial Sequence: primer

<400> 30
gactgcgtac caattcacg 19

<210> 31
<211> 19
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: primer

<400> 31
gatgagtcct gagtaaata 19

<210> 32
<211> 19
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: primer

<400> 32
gactgcgtac caattcgga 19

<210> 33
<211> 20
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: primer

<400> 33
atggacccaa caagtggaag 20

<210> 34
<211> 20
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: primer

<400> 34
aggaagactt tggaggccat 20

<210> 35
<211> 19
<212> DNA
<213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence: primer

 <400> 35
 gatgagtcct gagtaatgg 19

 <210> 36
 <211> 19
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Description of Artificial Sequence: primer

 <400> 36
 gactgcgtac caattcgga 19

 <210> 37
 <211> 19
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Description of Artificial Sequence: primer

 <400> 37
 gatgagtcct gagtaacaa 19

 <210> 38
 <211> 19
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Description of Artificial Sequence: primer

 <400> 38
 gactgcgtac caattcggg 19

 <210> 39
 <211> 19
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 <220>
 <223> Description of Artificial Sequence: primer

 <400> 39
 gatgagtcct gagtaaacg 19

 <210> 40
 <211> 19

<212> DNA
 <213> Artificial Sequence

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 <400> 40
 gactgcgtac caattccat 19

 <210> 41
 <211> 19
 <212> DNA
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 <220>
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 <400> 41
 gatgagtcct gagtaaattg 19

 <210> 42
 <211> 19
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Description of Artificial Sequence: primer

 <400> 42
 gactgcgtac caattcata 19

 <210> 43
 <211> 19
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Description of Artificial Sequence: primer

 <400> 43
 gatgagtcct gagtaaactg 19

 <210> 44
 <211> 19
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Description of Artificial Sequence: primer

 <400> 44
 gactgcgtac caattcgat 19

<210> 45
 <211> 19
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Description of Artificial Sequence: primer

 <400> 45
 gatgagtcct gagtaaacg 19

 <210> 46
 <211> 19
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Description of Artificial Sequence: primer

 <400> 46
 gactgcgtac caattcgga 19

 <210> 47
 <211> 16
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Description of Artificial Sequence: primer

 <400> 47
 gacgatgagt cctgag 16

 <210> 48
 <211> 14
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Description of Artificial Sequence: primer

 <400> 48
 tactcaggac tcat 14

 <210> 49
 <211> 17
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Description of Artificial Sequence: primer

<400> 49
ctcgtagact gcgtacc 17

<210> 50
<211> 18
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: primer

<400> 50
aattggtacg cagtctac 18

<210> 51
<211> 16
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: primer

<400> 51
gatgagtcct gagtaa 16

<210> 52
<211> 16
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: primer

<400> 52
gactgcgtac caattc 16

<210> 53
<211> 664
<212> DNA
<213> Hordeum vulgare

<220>
<221> UNSURE
<222> (10)
<223> n is a or g or t or c

<400> 53
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ataagcactt ggtattcact aatccatgaa aatagttatt attcaaaaca cagggagatc 120
gcaagggagt ctgatctgaa aaggccctag aagccattca gtaaccacga gagtaacaag 180
ttgcagaaag ctagaaacaa ctggaatact taatcccttg acattcaaaa acatgaagaa 240
tgtcaaaatg atgattcata acacgatcga tcaaaaggac cagtcattctg gaagaactct 300
tggtagtcgt tcagtaacgg cgtggaggga accggtccag gagcctccca gatggacact 360

cgtaagccat	gtgaccacga	ccaccacagt	tgttgcagat	catgaaggcg	ccacccatgc	420
agtcacggct	catatggcca	acctgggttc	aggcccgga	gacccatgtca	ctgtagccac	480
cacggaagag	agcaccgccc	ccaccacgga	aggagcatc	gccaccacgg	aacagagcat	540
cgccgccacg	gaacagagcg	tcaccgccac	ggaacagagc	gtcaccacca	cggaaggagg	600
gaggcccacc	cctctcgttg	atttcgtcgg	atttggggca	ttgacggggc	aaatgccttg	660
caac						664

<210> 54
 <211> 545
 <212> DNA
 <213> Hordeum vulgare

<400> 54						
cagcataaat	ctcgtaaccc	atagcaggca	tcaggtagaa	gtattactgt	atgcaggggg	60
gacatcattg	tgataaatca	taaggtaggt	aattttccat	aactcaaaat	tttgatctaa	120
gcttctatct	ttctctctct	ctctctaata	gggtgcctga	tcacagcga	cttcaggact	180
tgctcctcgt	aacaaaccag	ctgagtcctg	acgaaacaat	ccagaaagtc	agcagcaagg	240
aagcaagccc	tggggtcttc	aaaaggcaat	cgaccaatct	tcttgtgtgg	cctcagtggt	300
ggtctgttct	actccgcctt	cttgggtccg	aagtctgacc	tcattgacga	aacctttttc	360
ttgcaactgca	ccactgtttt	accagggaca	gcagtagcta	ctcgtctcca	tctttgggtt	420
gcaccttgg	gaaatgcctt	caaagcttga	acaagggcca	gcacctgagc	ctctgaccag	480
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ttggc						545

<210> 55
 <211> 21
 <212> DNA
 <213> Hordeum vulgare

<400> 55	
cttatgtgat	cataatactg c
	21

<210> 56
 <211> 21
 <212> DNA
 <213> Hordeum vulgare

<400> 56	
cttatgtgat	aataatactg c
	21

<210> 57
 <211> 514
 <212> DNA
 <213> Hordeum vulgare

<400> 57						
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acaacaatgt	gcacaccaag	gttgacagtt	acacggctga	cagctgttac	aactcccaga	120
agaatgggtt	ggctttttaca	aagaagaaaa	aaaatgatca	aaaatttgcg	tctccctccg	180
cagtgatcca	agttcccaag	ggcagcttct	taggggagcc	cctagatgca	aatggatccg	240
ggcatccccg	ccaagcgaac	ttctttttgtg	cgcggtggaag	aagcagcctt	ccaccggtat	300
catttacttg	gcaattctac	atccgtaaga	actattcatc	tatacagccg	gaatttttag	360
aaggacgagt	gagcagcaat	acagacatac	ggagatggca	accccggcga	tgaaattctg	420

gtacagggcgg ttgttgcttc tactgggaat gaaggctgcc ctcagcacgt ttgtgatctc 480
aaatactcgg tatgacagca aaagatagat tgat 514

<210> 58
<211> 21
<212> DNA
<213> Hordeum vulgare

<400> 58
agccttccac tggatcatt t 21

<210> 59
<211> 21
<212> DNA
<213> Hordeum vulgare

<400> 59
agccttccac cggatcatt t 21

<210> 60
<211> 540
<212> DNA
<213> Hordeum vulgare

<220>
<221> UNSURE
<222> (2)
<223> n is a or g or t or c

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ttgaccgaat ggaccaaca agtggaaggc attctatatg aattacagtt atagctccat 120
gacgttctac agtactatga cattacatcc atgatagcta attgtacaaa agagtgaatg 180
aaatgaacta cgaaaatcca gcatcatagt tctgcagtcg ggcttctcag aagtgagcca 240
agctgtatac tagagtccat gaaagcagga aaagggtgaa cgaggcaaag agcccctcct 300
gaagtagggc ggcattggcct ccaaagtctt cctcatcaat cttcagcaga tgtgcatagt 360
acaaatgaac tattacgggtg gaaatagtaa agaatagggc gatccagaag gcgccgacga 420
gggggacggc gccccagagc aggccgcagg cgagccccac cgcttgccgg atccagtgca 480
ccgcgtccag cagctggtcc ttgtccaagg acgcgtcggg gtcgaggtac cgggcgagcc 540

<210> 61
<211> 21
<212> DNA
<213> Hordeum vulgare

<400> 61
tttatgtgcc tgtagcgggt g 21

<210> 62
<211> 21
<212> DNA
<213> Hordeum vulgare

<400> 62
tttatgtgcc ggtagcggtt g

21